

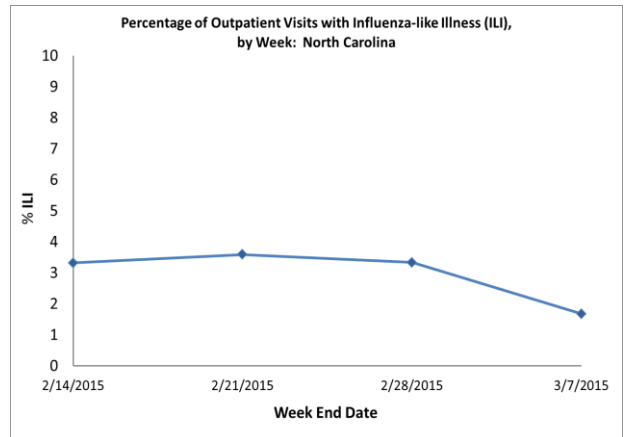
NORTH CAROLINA WEEKLY INFLUENZA SURVEILLANCE SUMMARY #23

2014–15 INFLUENZA SEASON

WEEK 9: ENDING MARCH 7, 2015

Statewide Updates

- Influenza-like illness decreased during week 9.
- The geographic spread of flu was REGIONAL for the week ending 3/7/2015.
- Of the 7 samples submitted to the State Laboratory of Public Health (SLPH) for viral testing this week 3 were positive for influenza B, 1 positive influenza A (H3) and 1 positive for influenza A (H1N1).
- Hospital-based Public Health Epidemiologists (PHEs) reported 137 positive influenza results out of 860 specimens tested during week 9 (ending 3/7/2015); 69 influenza B, 44 influenza A (subtype unknown), and 24 influenza A (H3).



Regional Updates

- Influenza like illness was above baseline in Region 4 (Southeastern US) during week 8 ending 2/28/2015.
- The proportion of visits due to ILI in region 4 was 2.3% for week 8. The baseline for the region is 1.9%.

National Updates

- The proportion of outpatient visits due to ILI nationally was 2.5% for week 8 (ending 2/28/2015). The national baseline for ILI is 2.0%.

International Updates: March 9, 2015 – Globally, influenza activity remained high in the northern hemisphere with influenza A(H3N2) viruses predominating. Some countries in Africa, Asia and southern part of Europe reported an increase in influenza A(H1N1). In North America, influenza activity remained elevated following the peak with influenza A(H3N2) as the dominant virus. In Europe, the influenza season was at its height and influenza A(H3N2) virus continued to predominate. In northern Africa and the middle East, influenza activity was decreasing and influenza A was predominant. In the temperate countries of Asia, influenza activity decreased from its peak in northern China and Mongolia, but continued to increase in the Republic of Korea. In tropical Asia, influenza activity continued to increase. Influenza activity remained high in southern China, China Hong Kong Special Administrative Region, and the Islamic Republic of Iran. Influenza A(H3N2) virus predominated. In tropical countries of the Americas, influenza activity remained low. In the southern hemisphere, influenza activity remained at inter-seasonal level.

Flu Information and Guidance

North Carolina
www.flu.nc.gov

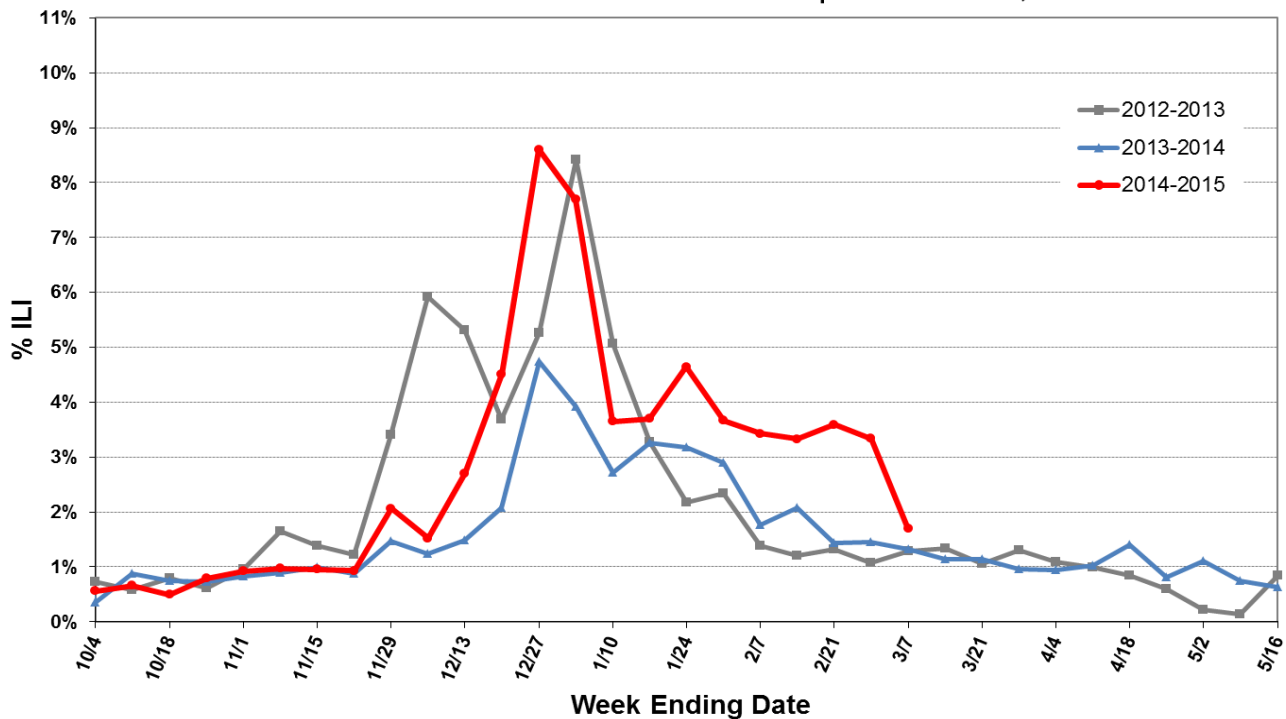
CDC
<http://www.cdc.gov/flu>

INFLUENZA-LIKE ILLNESSES REPORTED BY ILINET SITES, 2014-15

Week # - Ending	(Sentinels Reporting)	# ILI	# Patients	% ILI
#40 – 10/4/2014	45	82	14730	0.55
#41 – 10/11/2014	49	102	15521	0.65
#42 – 10/18/2014	48	73	14860	0.49
#43 – 10/25/2014	52	133	16890	0.78
#44 – 11/1/2014	53	160	17384	0.92
#45 – 11/8/2014	51	169	17478	0.96
#46 – 11/15/2014	52	154	16174	0.95
#47 – 11/22/2014	52	169	18143	0.93
#48 – 11/29/2014	51	220	10677	2.06
#49 – 12/6/2014	51	260	17082	1.52
#50 – 12/13/2014	52	439	16235	2.7
#51 – 12/20/2014	51	670	14850	4.51
#52- 12/27/2014	49	626	7277	8.6
#53 – 1/3/2015	49	690	8972	7.69
#1 – 1/10/2015	50	525	14378	3.65
#2 – 1/17/2015	49	587	15895	3.69
#3 – 1/24/2015	50	698	15040	4.64
#4 – 1/31/2015	46	583	15918	3.66
#5 – 2/7/2015	48	565	16474	3.42
#6 – 2/14/2015	40	454	13636	3.32
#7 – 2/21/2015	40	395	10991	3.59
#8 – 2/28/2015	35	348	10437	3.33
#9 – 3/7/2015	28	182	10771	1.68

INFLUENZA SURVEILLANCE, NC 2012-2015

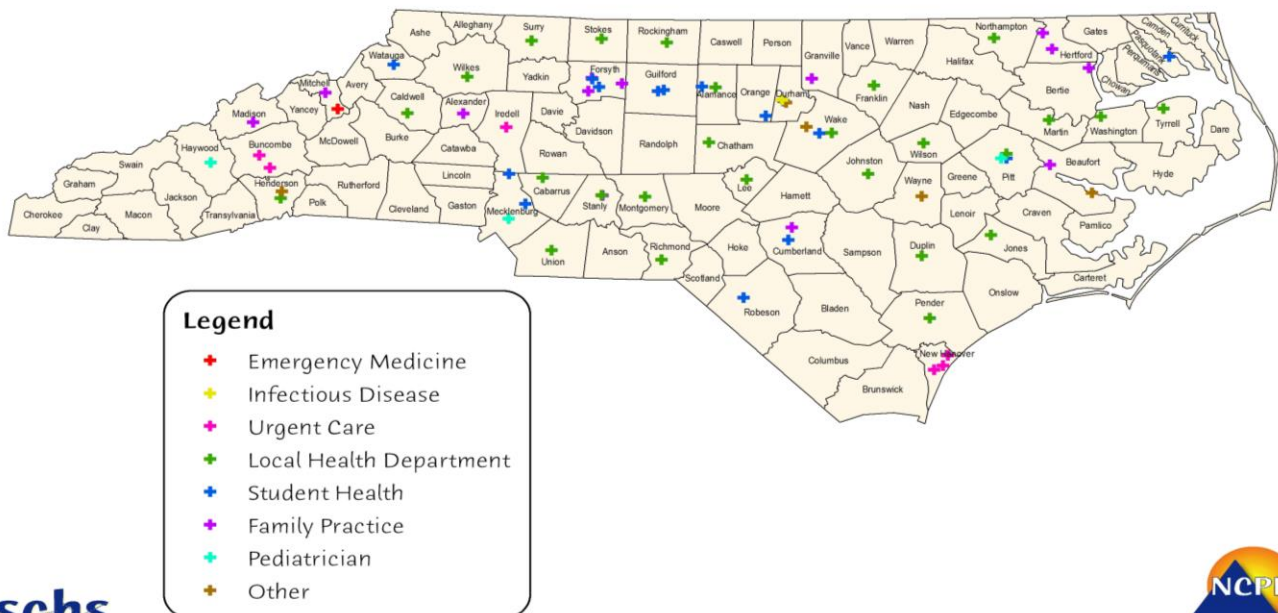
Influenza-Like Illness in ILINet Outpatient Visits,



For more information about comparable national data, visit www.cdc.gov/ncidod/diseases/flu/weekly.htm and in particular, click on the link "View Chart Data" below "Percentage of Visits for Influenza-like Illness Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet)".

North Carolina ILINetwork Provider Locations

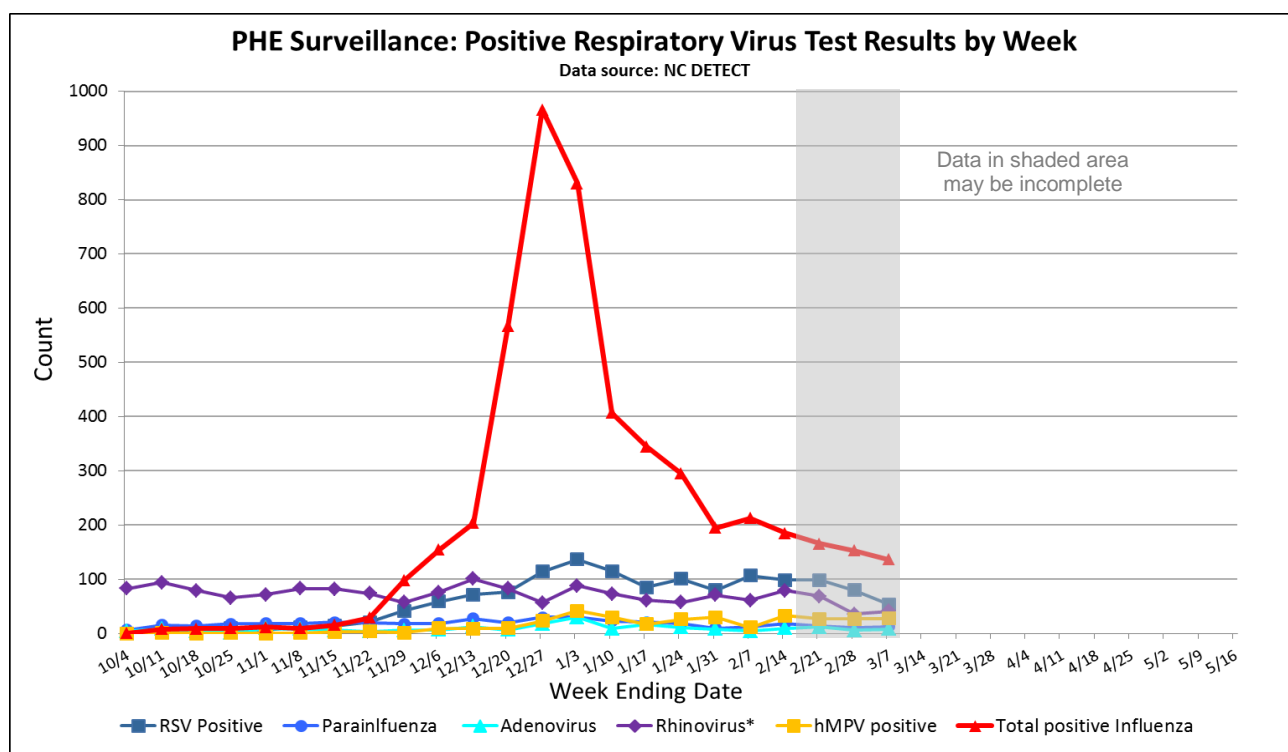
2014-2015



PHE Respiratory Viral Pathogen Surveillance

Positive test results for selected respiratory viruses are reported on a weekly basis by Public Health Epidemiologists (PHEs) located in seven of the largest hospital networks across North Carolina. The graph below shows the number of positive tests for respiratory syncytial virus (RSV), parainfluenza, adenovirus, rhinovirus, and human metapneumovirus (hMPV) by week ending with 10/4/2014.

These data provide a useful indication of which other respiratory viruses are circulating and possibly contributing to ILI in the state. Please note that the total number of tests performed is not available from all hospital networks, so the overall proportion testing positive cannot be calculated. Also, testing protocols and practices differ among hospitals. Finally, these numbers reflect test results from participating hospitals only and might not be reflective of the entire state.



* Most facilities use tests that do not distinguish rhinoviruses from enteroviruses.

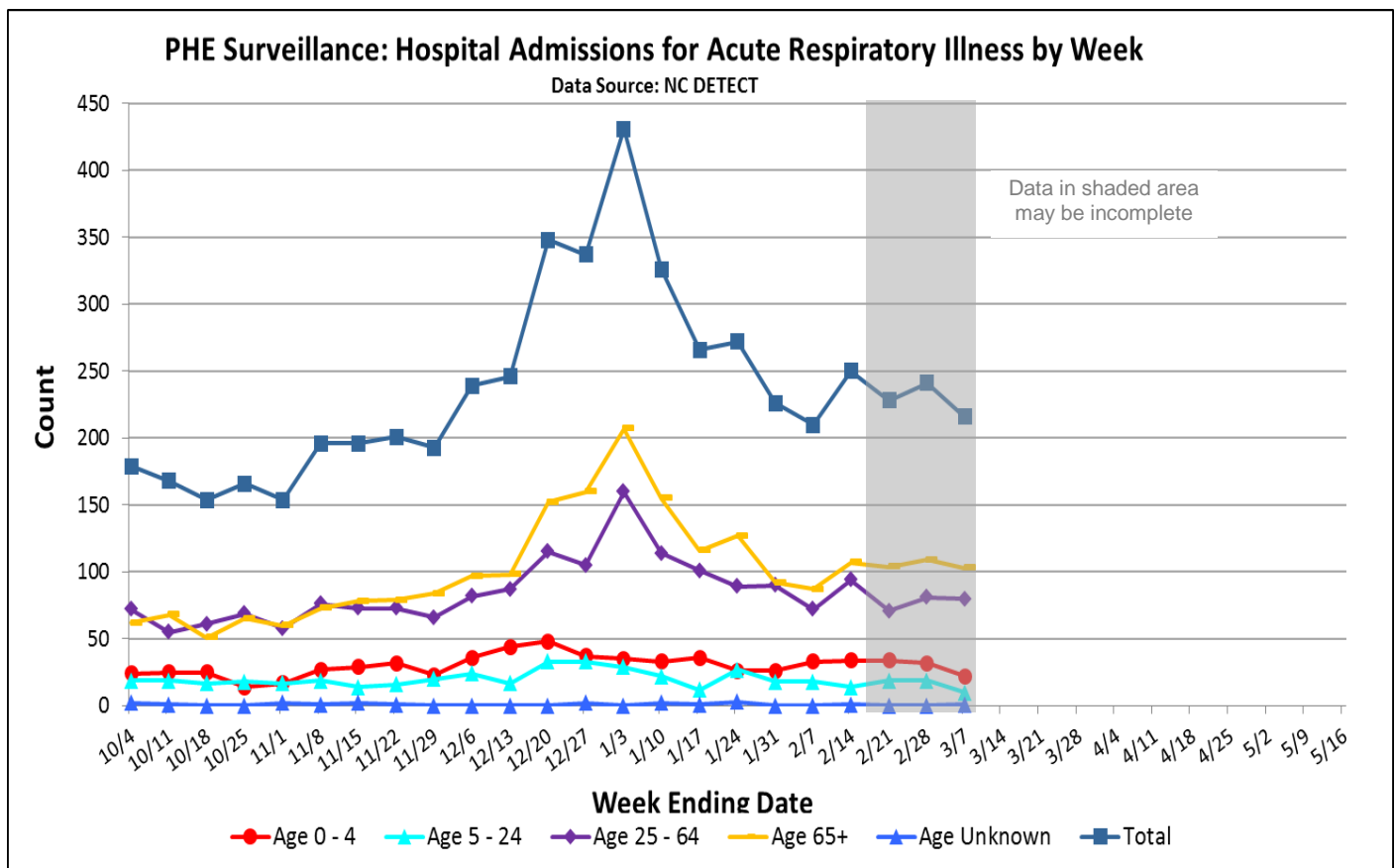
- Influenza was the most frequently identified respiratory viral pathogens during week 9 (ending 3/7/2015) followed by RSV.
- Hospital-based Public Health Epidemiologists (PHEs) reported 137 positive influenza results out of 860 specimens tested during week 9 (ending 3/7/2015); 69 influenza B, 44 influenza A (subtype unknown), and 24 influenza A (H3).

INFLUENZA VIRUS POSITIVES IDENTIFIED BY PHE HOSPITALS 2014–2015 SEASON		
Virus Type	# New positive results (3/1/2015-3/7/2015)	# Cumulative positive results (9/28/2014- 3/1/2015)
A (subtype unknown)	44	3186
2009 A(H1N1)	0	54
A/H3	24	1337
B	69	434
Total	137	5011

PHE Acute Respiratory Admissions Surveillance

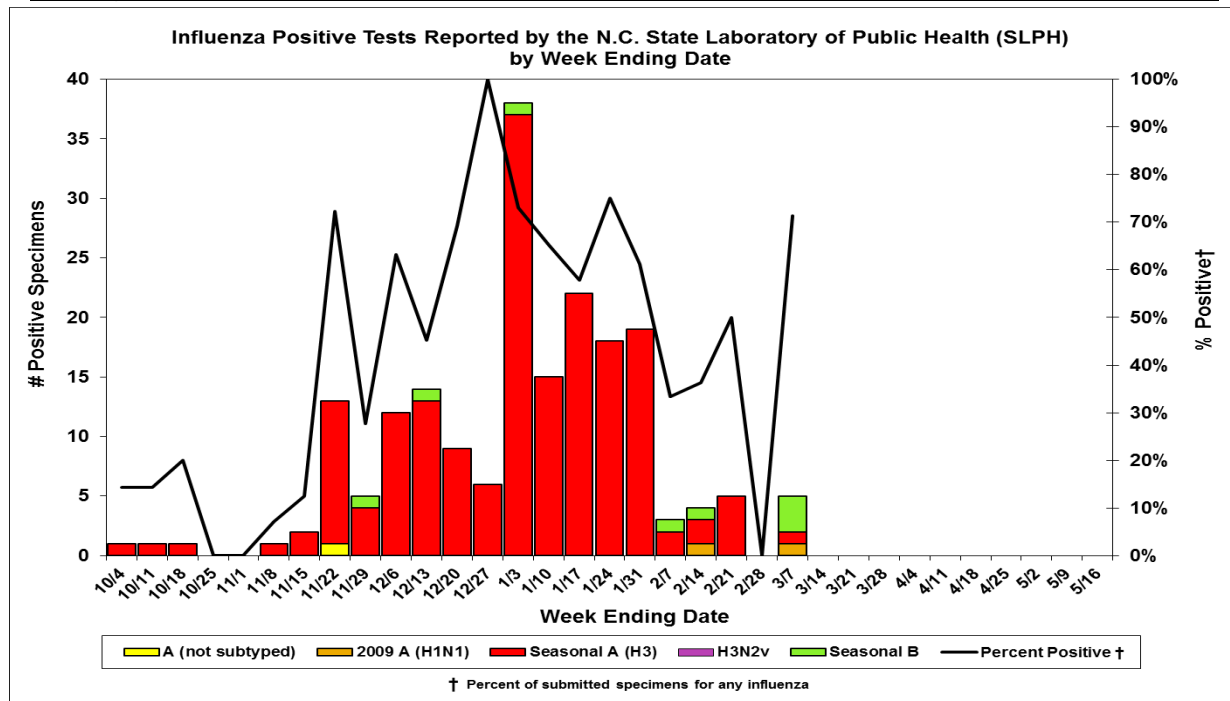
The number of patients admitted to the hospital with fever plus respiratory symptoms in the absence of a known cause other than influenza is reported on a weekly basis by Public Health Epidemiologists (PHEs) located in seven of the largest hospital networks across North Carolina. The graph below shows the number of acute respiratory illness admissions to participating hospitals by age group.

In conjunction with other surveillance information, these data help us monitor for changes in severity of illness during periods when influenza is circulating. Please note that these reports are not limited to patients with laboratory-confirmed influenza infection. Also, these numbers reflect admissions to participating hospitals only and might not be reflective of the entire state.



- Acute respiratory admissions decreased during week 9 (ending 3/7/2015).
- The highest number of acute respiratory admissions was reported among patients age 65 and over followed by age 25-64 years during week 9.

Virologic Surveillance Information from the North Carolina State Laboratory of Public Health



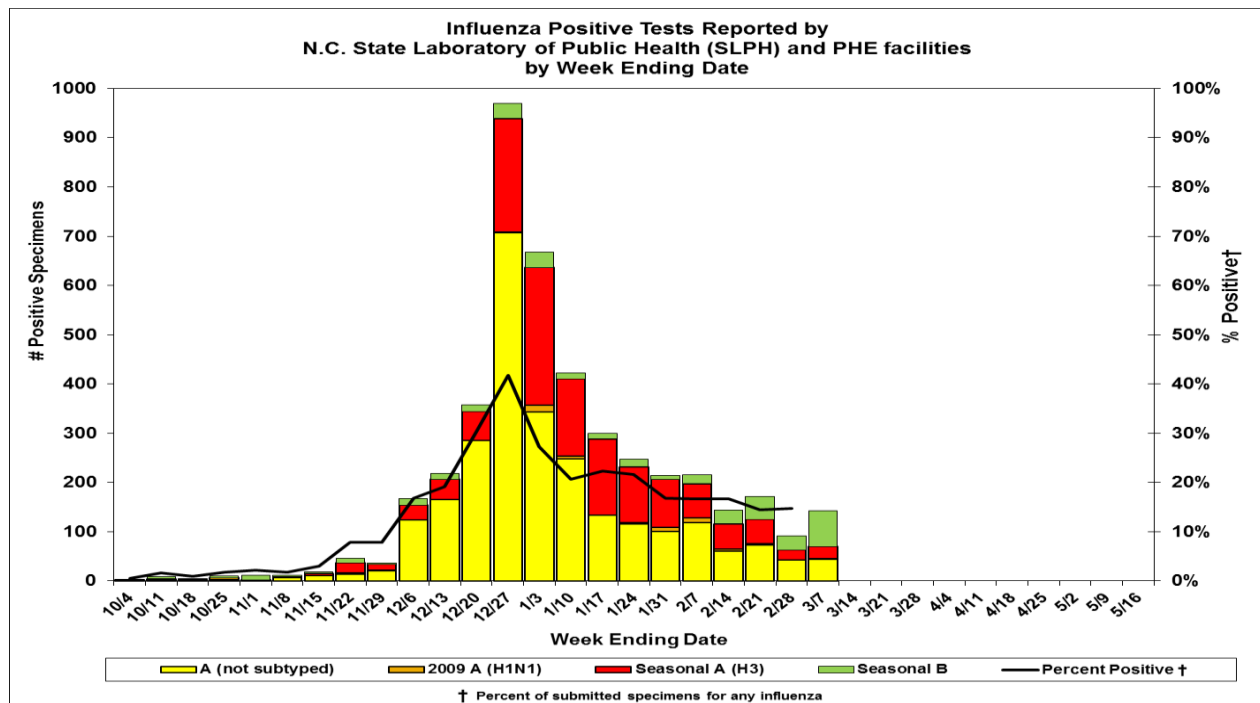
INFLUENZA VIRUS ISOLATES FROM IN-STATE PATIENTS IDENTIFIED BY THE STATE LABORATORY OF PUBLIC HEALTH 2014–2015 SEASON*

Virus Type	# New Positive Results (3/1/15 - 3/7/15)	# Cumulative Positive Results (9/28/14 - 3/7/2015)
A (subtype unknown)	0	1
2009 A(H1N1)	1	2
A/H3	1	183
B	3	8
Total	5	194

* 2014-2015 influenza season began September 28, 2014.

NOTE: This table only includes isolates tested as of 3/7/15.

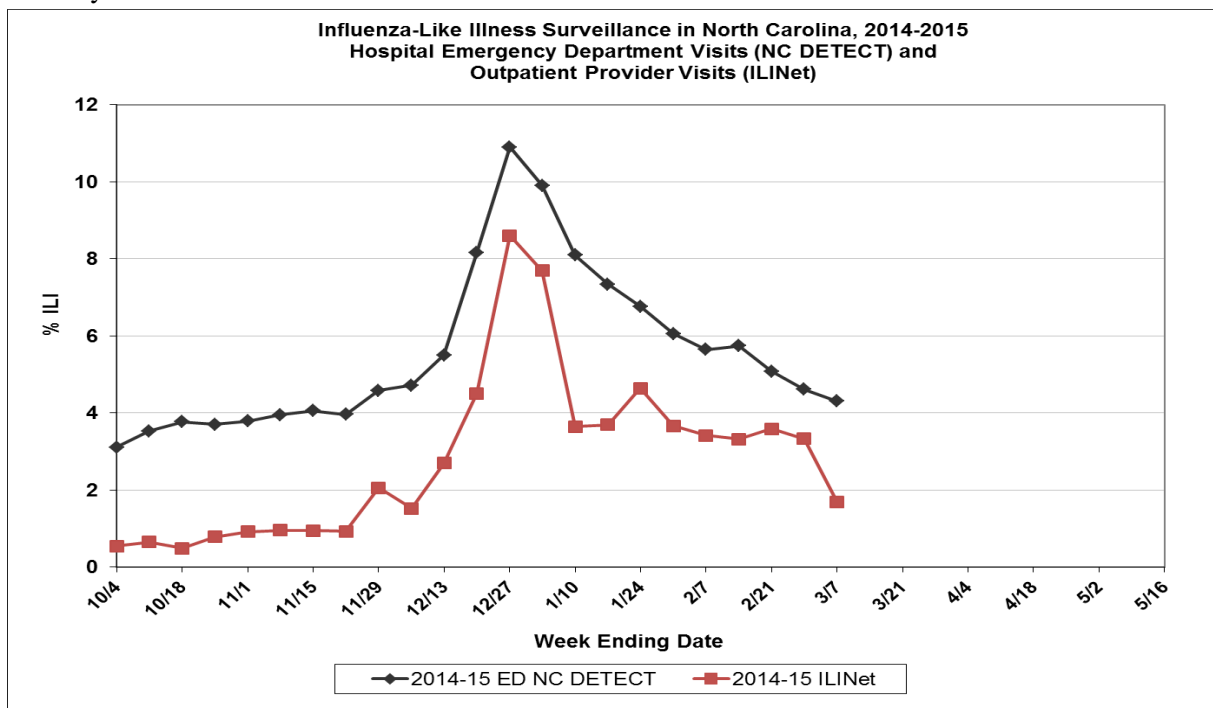
This table does not include influenza isolates identified by other laboratories.



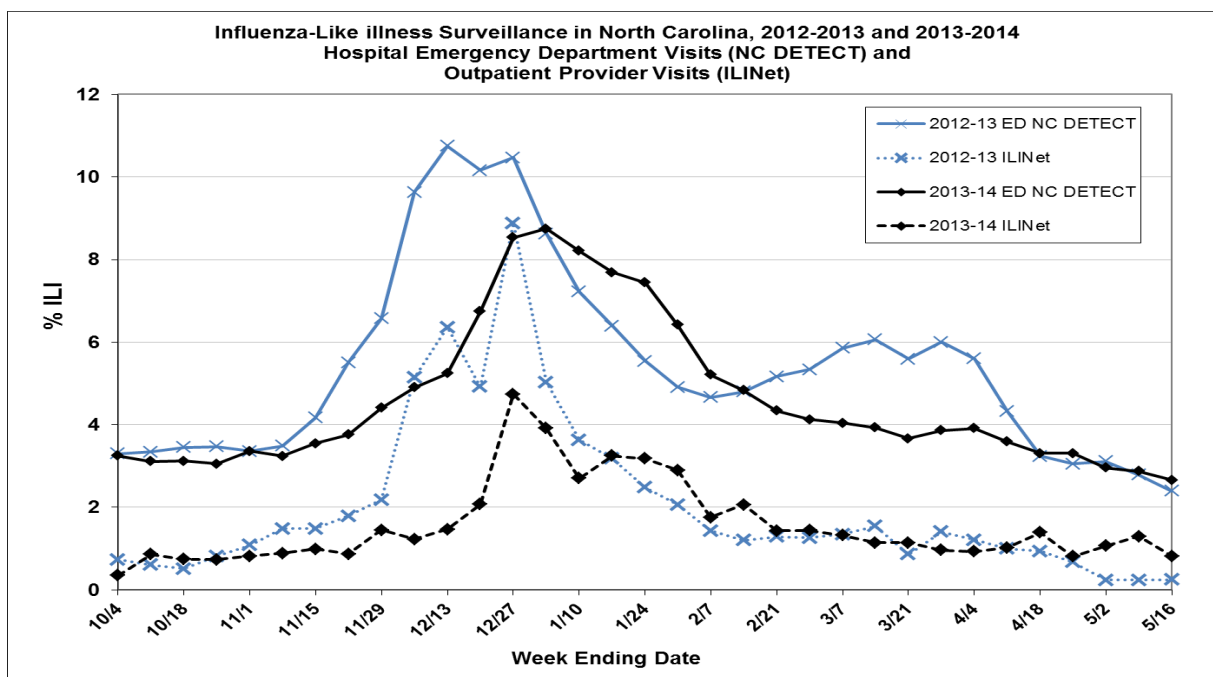
North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) ILI Surveillance

Near real-time syndromic surveillance for ILI is conducted through the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). This system uses a variety of data sources including emergency departments (EDs). NC DETECT is currently receiving data daily from 122 of the 123 24/7 EDs in North Carolina. The NC DETECT ILI syndrome case definition includes any case with the term “flu” or “influenza”, or at least one fever term and one influenza-related symptom.

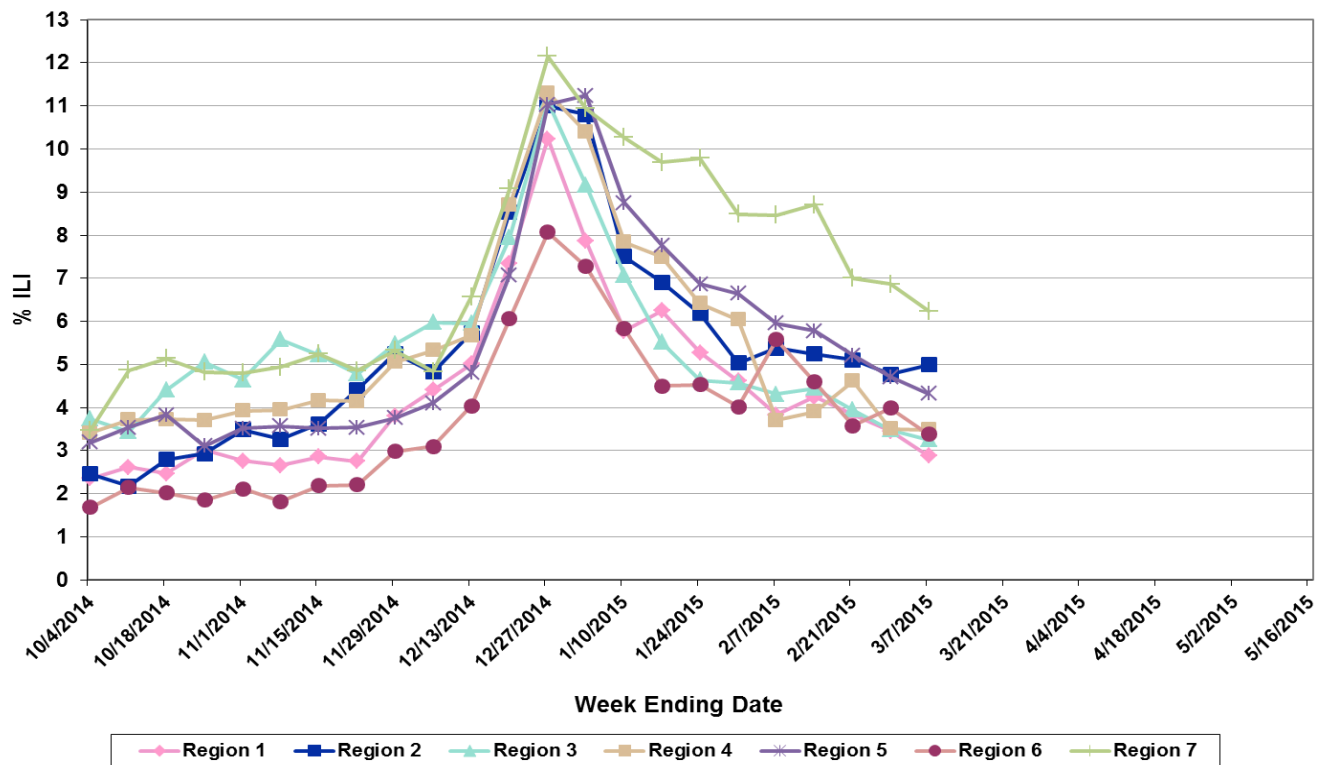
The proportion of ED visits meeting the ILI syndrome definition is monitored throughout the year and compared to data obtained from Influenza-like Illness Surveillance Network (ILINet). In past years, data from the two systems have shown similar trends (below). The higher proportion of ILI seen in NC DETECT compared to ILINet reflects differences in the case definitions and patient populations rather than a difference in the sensitivity of these surveillance systems.



2012-2014 Influenza Season: Shown For Comparison

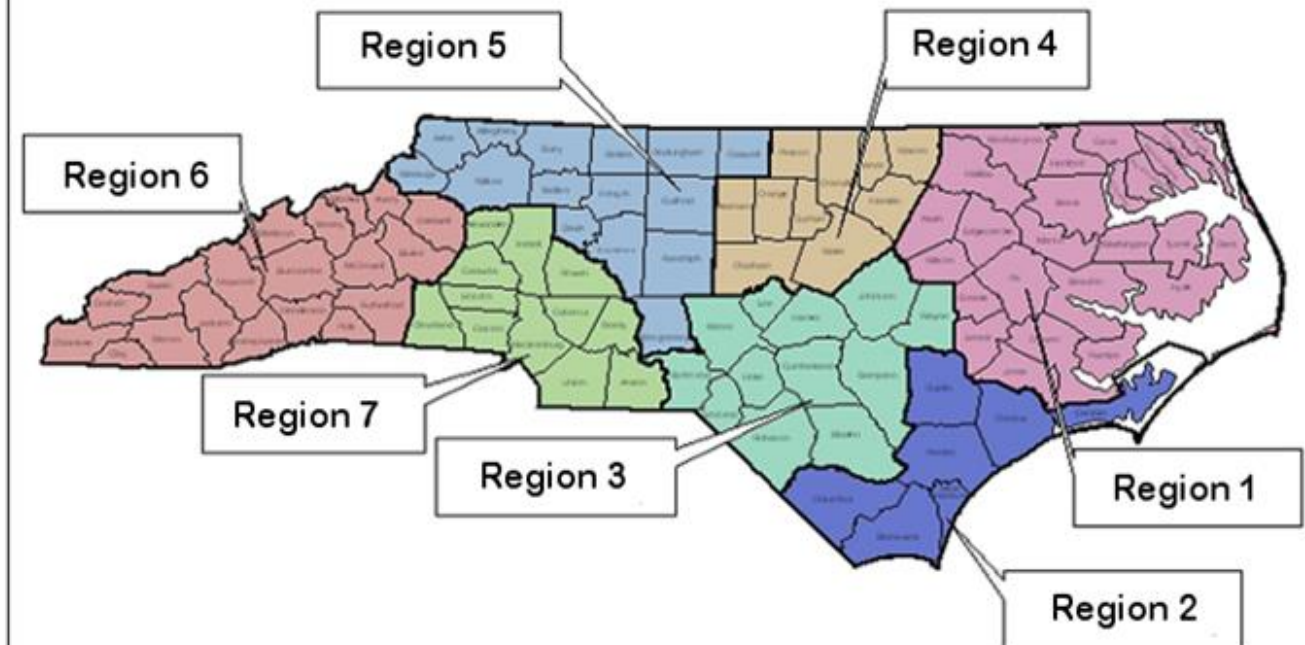


**Percentage of Total Visits by Week, Grouped by Flu Surveillance Regions:
NC DETECT ED Influenza-Like Illness (ILI), 2014-15**



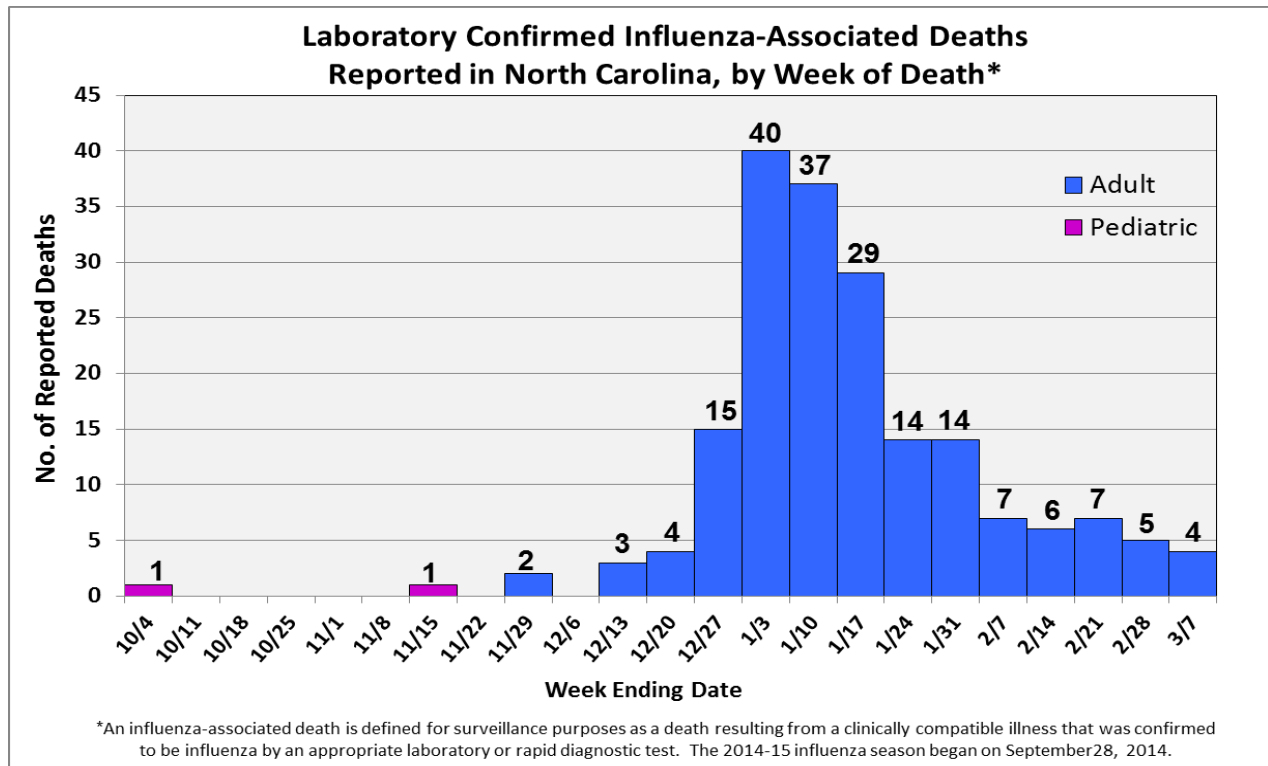
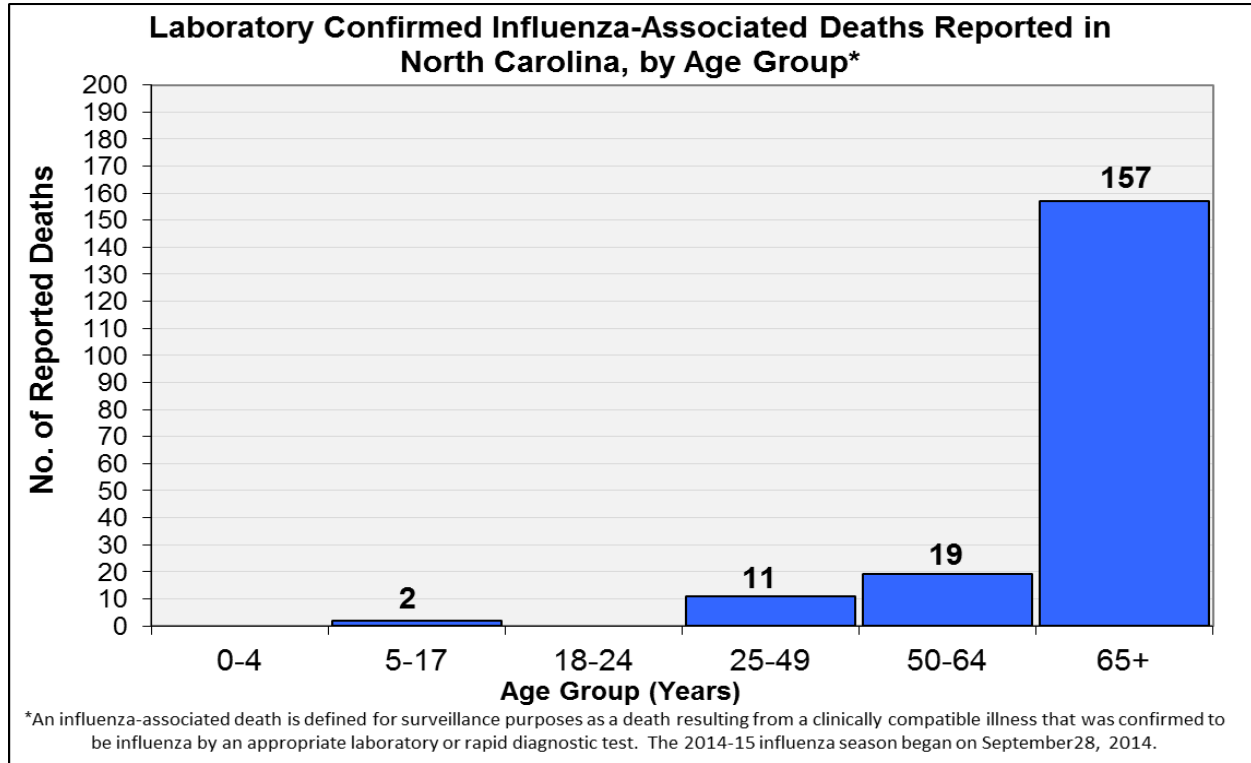
NOTE: This graph begins with data starting week ending October 4, 2014 for the 2014-15 influenza season.

Flu Surveillance Regions



NC Influenza-Associated Deaths*	
Influenza-Associated Deaths 3/1/2015 – 3/7/2015	Total Influenza-Associated Deaths Since Week 40 (ending 10/04/14)
4	189

***Influenza-associated Deaths** –This number is based on reports submitted by providers to the North Carolina Division of Public Health. An influenza-associated death is defined for surveillance purposes as a death (adult or pediatric) resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test with no period of complete recovery between the illness and death. Deaths that occurred after 3/7/2015 will be included in subsequent surveillance summaries.



**PARTICIPANTS IN NORTH CAROLINA'S INFLUENZA SENTINEL
SURVEILLANCE PROGRAM THAT HAVE REPORTED DATA TO CDC**

LOCAL HEALTH DEPARTMENT/DISTRICT OFFICES [26]:

Alamance County Health Department (Burlington)
Cabarrus Health Alliance (Kannapolis)
Caldwell County Health Department (Lenoir)
Chatham County Health Department (Siler City)
Duplin County Health Department (Kenansville)
Franklin County Health Department (Louisburg)
Henderson County Health Department (Hendersonville)
Johnston County Health Department (Smithfield)
Jones County Health Department (Trenton)
Lee Primary Care (Sanford)
Martin County Office [Martin-Tyrrell-Washington County Health District] (Williamston)
Montgomery County Health Department (Troy)
Northampton County Health Department (Jackson)
Pender County Health Department (Burgaw)
Pitt County Public Health Center (Greenville)
Richmond County Health Department (Rockingham)
Rockingham County Health Department (Wentworth)
Stanly County Health Department (Albemarle)
Stokes Family Health Center (Danbury)
Surry County Health and Nutrition Center (Dobson)
Tyrrell County Office [Martin-Tyrrell-Washington County Health District] (Columbia)
Union County Health Department (Monroe)
Wake County Health Department, Children's Clinic (Raleigh)
Washington County [Martin-Tyrrell-Washington County Health District] (Plymouth)
Wilkes County Health Department (Wilkesboro)
Wilson County Health Department (Wilson)

COLLEGES AND UNIVERSITIES STUDENT HEALTH PROGRAMS [16]:

Appalachian State University Student Health Services (Boone; Watauga Co.)
Davidson College Student Health Center (Davidson; Mecklenburg Co.)
Duke University Student Health Services (Durham; Durham Co.)
ECU Student Health Services (Greenville; Pitt Co.)
Elizabeth City State University Student Health Services (Elizabeth City; Pasquotank Co.)
Elon University R. N. Ellington Health and Counseling Center (Elon; Alamance Co.)
Fayetteville State University (Fayetteville; Cumberland Co.)
Mount Olive College Milton M. Lownes Jr., MD Student Health Services (Mount Olive; Wayne Co.)
NC Agricultural & Technical State University Student Health Services (Greensboro; Guilford Co.)
NC State University Student Health Services (Raleigh; Wake Co.)
UNC-Chapel Hill Student Health Services (Chapel Hill; Orange Co.)
UNC-Charlotte Student Health Services (Charlotte, Mecklenburg Co.)
UNC-Greensboro Student Health Services (Greensboro; Guilford Co.)
UNC-Pembroke Student Health Services (Pembroke; Robeson Co.)
Wake Forest University Student Health Services (Winston-Salem; Forsyth Co.)
Winston-Salem State University (Winston-Salem; Forsyth Co.)

PRIVATE PRACTITIONERS [25]:

Bakersville Community Medical Center (Bakersville; Mitchell Co.)
Blue Cross and Blue Shield of N.C. (Durham; Durham Co.)
Blue Ridge Community Health Services (Hendersonville; Henderson Co.)
Butner-Creedmoor Family Medicine (Creedmore; Granville Co.)
Carolina East Medical Associates (Washington; Beaufort Co.)
Colerain Primary Care (Colerain; Bertie Co.)
Dilworth Pediatrics (Charlotte; Mecklenburg Co.)
ECU Brody School of Medicine – Department of Pediatrics (Greenville; Pitt Co.)
Family Care Center (Taylorsville; Alexander Co.)
Haywood Pediatric and Adolescent Medicine Group, PA (Clyde; Haywood Co.)
Hot Springs Health Program (Marshall; Madison Co.)
MEDAC Health Services at Shipyard Blvd. (Wilmington; New Hanover Co.)
MEDAC Health Services at Porter's Neck (Wilmington; New Hanover Co.)
MEDAC Health Services at Military Cutoff (Wilmington; New Hanover Co.)
MinuteClinic Mooresville (Mooresville; Iredell Co.)
Murfreesboro Primary Care (Murfreesboro; Hertford Co.)
PrimeCare (Winston-Salem; Forsyth Co.)
PrimeCare of Kernersville (Kernersville; Forsyth Co.)
PrimeCare of Northpoint (Winston-Salem; Forsyth Co.)
Roanoke Chowan Community Health Center (Ahoskie; Hertford Co.)
SAS Institute Health Care Center (Cary; Wake Co.)
Sisters of Mercy Urgent Care, South (Asheville; Buncombe Co.)
Sisters of Mercy Urgent Care, West (Asheville; Buncombe Co.)
Stanly Family Care Clinic (Albemarle; Stanly Co.)
Steven C. Hill, MD, PC (Spruce Pine; Mitchell Co.)

HOSPITALS [4]:

Blue Ridge Regional Hospital (Spruce Pine; Mitchell Co.)
Cape Fear Valley Health System Primary Care Practices (Fayetteville; Cumberland Co.)
Durham VAMC (Durham; Durham Co.)
Seymour Johnson Air Force Base Medical Group (Goldsboro; Wayne Co.)

OTHER [1]:

PotashCorp (Aurora; Beaufort Co.)

TOTAL SENTINELS ENROLLED – 70

Counties covered (48): Alamance (2), Alexander, Beaufort (2), Bertie, Buncombe (2), Cabarrus, Caldwell, Chatham, Cumberland (2), Duplin, Durham (3), Forsyth (5), Franklin, Granville, Guilford (2), Haywood, Henderson (2), Hertford (2), Iredell, Johnston, Jones, Lee, Madison, Martin, Mecklenburg (3), Mitchell (2), Montgomery, New Hanover (3), Northampton, Orange, Pasquotank, Pender, Pitt (3), Richmond, Robeson, Rockingham, Stanly (2), Stokes, Surry, Tyrrell, Union, Wake (3), Washington, Watauga, Wayne, Wilkes, Wilson